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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,038	10/12/2001	Douglas P. Brown	10150 (NCRC-0063-US)	3717
26890	7590	09/10/2004	EXAMINER	
JAMES M. STOVER NCR CORPORATION 1700 SOUTH PATTERSON BLVD, WHQ4 DAYTON, OH 45479			WOO, ISAAC M	
			ART UNIT	PAPER NUMBER
			2172	

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,038

Applicant(s)

BROWN ET AL.

Examiner

Isaac M Woo

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 and 43-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-40 and 43-46 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's Amendments, filed on May 17, 2004 have been considered but are deemed moot because the amendments of claims 1, 7, 22, 27, 37 and 40 necessitated Restrictions Request below.

2. Claims 1-40 and 43-46 are pending. Claims 1-7, 9-22, 27, 37 and 40 are amended. Claims 44-46 are newly added. Claims 41-42 are canceled.

Election/Restrictions

3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even through the requirement be traversed (37 CFR 1.143). Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-21 and 46, drawn to a system for receiving set of queries and to provide set of candidate indexes for the set of queries, which is query processing, query formulation augmenting and query refining, classified in class 707, subclass 5.
- II. Claims 22-26, 33-36 and 39, drawn to a method for database system being a parallel database having a plurality of access modules, and the

access modules to manage parallel access of database tables, which is database accessing, classified in class 707, subclass 2.

- III. Claims 27-32, drawn to a method for providing graphical user interface screens to receive user input and to display an activatable item to perform workload identification to identify the workload, which is graphical user interface to display user input and status, classified in class 715, subclass 513.
- IV. Claims 37-38, drawn to a method for invoking the optimizer is performed in a test system separate from the database system: and importing environment information of the database system into the test system to emulate the database system in the test system, which is database management, classified in class 707, subclass 200.
- V. Claims 40 and 43-45, drawn to a method for invoking an optimizer to provide cost analysis to generate the recommended index from the set of candidate indexes, and invoking the optimizer is performed in a test system separate from the database system, which is data indexing management and manipulating data structure, classified in class 707, subclass 101.

- 4. The inventions are distinct, each from the other because of the following reasons:
Inventions I, II, III, IV and V are related as subcombinations disclosed as usable

Together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instance case, invention I can be used for receiving set of queries and to provide set of candidate indexes for the set of queries, which is query processing, query formulation augmenting and query refining. Invention II can be used for database system being a parallel database having a plurality of access modules, and the access modules to manage parallel access of database tables, which is database accessing. Invention III can be used for providing graphical user interface screens to receive user input and to display an activatable item to perform workload identification to identify the workload, which is graphical user interface to display user input and status. Invention IV can be used for invoking the optimizer is performed in a test system separate from the database system: and importing environment information of the database system into the test system to emulate the database system in the test system, which is database management. Invention V can be used for invoking an optimizer to provide cost analysis to generate the recommended index from the set of candidate indexes, and invoking the optimizer is performed in a test system separate from the database system, which is data indexing management and manipulating data structure. See MPEP 806.05(d).

5. Because these inventions are distinct for reasons given above and have acquired separate status in the art as shown their different classification, restriction for examination purpose as indicated is proper.

6. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, III, IV and V each other, restriction for examination purposes as indicated is proper.
7. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
8. Applicants are advised that the reply to this requirement to be complete must include an election of the invention to be examined even through the requirement be traversed (37 CFR 1.143).
9. Applicants is reminded that upon the cancellation of claims to be non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48 (b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48 (b) and by the fee required under 37 CFR 1.17 (i).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMW
September 2, 2004


SHAHID ALAM
PRIMARY EXAMINER